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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,174	11/26/2003	Katrin Kneipp	M0925.70114US01	5755

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EXAMINER

HINES, JANA A

ART UNIT	PAPER NUMBER
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1645

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,174

Applicant(s)

KNEIPP ET AL.

Examiner

Ja-Na Hines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-195 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-195 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - A. Claims 1-22 are drawn to a method for determining the presence of at least one analyte comprising providing a plurality of aggregates, classified in class 436, subclass 171.
 - B. Claims 23-45 are drawn to a method for determining the presence of at least one analyte comprising a plurality of aggregates adsorbing a plurality of analytes, classified in class 424, subclass 9.32.
 - C. Claims 46-63 are drawn to a method for determining the presence of at least one analyte comprising a plurality of metal particles, classified in class 436, subclass 73.
 - D. Claims 64-77 are drawn to a method for determining the presence of at least one analyte comprising at least one aggregate adsorbing only one analyte, classified in class 436, subclass 173.
 - E. Claims 78-90 are drawn to a method for determining the presence of at least one analyte comprising a plurality of surfaces, a portion of the plurality of surfaces adsorbing only one analyte, classified in class 424, subclass 9.351.
 - F. Claims 91-95 are drawn to a method for determining the presence of at least one molecule comprising, classified in class 356, subclass 301.

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- G. Claims 96-106 are drawn to a method for sequencing at least a portion of DNA or RNA, classified in class 424, subclass 9.3.
- H. Claims 107-117 are drawn to a method for general field enhancement, classified in class 436, subclass 171.
- I. Claims 118-121 are drawn to a method for selecting a spectral range, classified in class 356, subclass 303.
- J. Claim 122 is drawn to a method for determining the presence of an analyte comprising providing a sample comprising a rough metal film including a plurality of protrusions and indentations, classified in class 436, subclass 149.
- K. Claims 123-124 are drawn to a system for determining the presence of at least one analyte, classified in class 435, subclass 287.2.
- L. Claims 125-137 are drawn to a method comprising sequentially removing nucleotides from one end of at least one nucleic acid, classified in class 435, subclass 442.
- M. Claims 138-149 are drawn to a method comprising obtaining nucleotides that are attached to Raman labels, classified in class 359, subclass 327.
- N. Claims 150-152 are drawn to an apparatus, classified in class 435, subclass 286.5.
- O. Claims 153-161 are drawn to a method comprising moving the nucleotides in a stream packed with nanoparticles, classified in class 424, subclass 458.

- P. Claims 162-172 are drawn to a method comprising preparing a nucleic acid comprising labeled nucleotides, classified in class 356, subclass 302.
- Q. Claims 173-178 are drawn to an apparatus comprising a reaction site for immobilizing a DNA fragment onto an aggregate, classified in class 359, subclass 327.
- R. Claims 179-187 are drawn to a method comprising attaching each of one or more nucleotides to at least one nanoparticle, classified in class 435, subclass 6.
- S. Claims 188-195 are drawn to a method comprising identifying each of the one or more nucleotides by Raman spectroscopy, classified in class 435, subclass 446.

2. The inventions are distinct, each from the other because of the following reasons:

(I) Inventions A-J, L-M, O-P and R-S are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the instant specification does not disclose that these methods would be used together. Each method has a distinct mode of operation and different effects. For instance, the method of group I is the only method that selects a spectral range, whereas the other methods recite having a different mode of operation along with different functions and effects. Each group has a different function which is unlike the functions of the other groups. In this case, group S identifies each of the one or more nucleotides by Raman spectroscopy, which is unlike group J, which is drawn to

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a method for determining the presence of an analyte comprising providing a sample comprising a rough metal film including a plurality of protrusions and indentations.

Therefore, the groups have different and unrelated functions. Therefore, each method is divergent in its mode of operation as evidenced by the methods having different functions and effects. For these reasons the inventions of groups A-J, L-M, O-P and R-S are patently distinct.

Furthermore, the distinct methods require separate and distinct searches. The inventions of Groups A-J, L-M, O-P and R-S have acquired a separate status in the art as shown by their different classifications. Moreover, in the instant case, the search for the each method is not coextensive. Group I requires a search drawn to determining the presence of at least one analyte comprising providing a plurality of aggregates, which is not required for the search of the other groups. The prior art teaches that determining the presence of at least one analyte comprising providing a plurality of aggregates, would not necessarily be applicable to a method drawn to obtaining nucleotides that are attached to Raman labels. Likewise, the search for group G which is drawn to a method for sequencing at least a portion of DNA or RNA would require a text search drawn sequencing at least a portion of DNA or RNA, and such a search would not necessarily encompass a search for a method comprising moving the nucleotides in a stream packed with nanoparticles. Therefore, said searches would not necessarily include a search for the other inventions.

Moreover, even if the method for general field enhancement were known, the

method for determining the presence of at least one analyte comprising a plurality of surfaces, a portion of the plurality of surfaces adsorbing only one analyte may be novel and unobvious in view of the preamble. As such, it would be burdensome to search the inventions of groups A-J, L-M, O-P and R-S together.

(II) Inventions K, N and Q are patentably different apparatuses. The apparatuses are distinct as claimed because they have different structures and different uses. Group K is drawn to a system for determining the presence of at least one analyte while Group Q is drawn to an apparatus comprising a reaction site for immobilizing a DNA fragment onto an aggregate. Each group has a different function, effect and is capable of use without the other. For instance, the apparatus of Group Q comprises a reaction site for immobilizing a DNA fragment onto an aggregate as opposed to the Group N which does not. Furthermore, only group K can determine the presence of at least one analyte. Each group has a different structure, produces different effects and has a different function from the other group. Therefore, the apparatuses of the inventions are distinct as claimed.

Furthermore, searching the inventions of groups K, N and Q would impose a serious search burden. The inventions have a separate status in the art as shown by their distinct structure. Thus different apparatuses require different searches. A search for an apparatus comprising a reaction site for immobilizing a DNA fragment onto an aggregate is not necessary for a determination of novelty and unobviousness of the other apparatuses. Moreover, a search of group K is not required to for the apparatus of

group N. Furthermore, the apparatus of group Q may be known even if the apparatus of group K is novel. In addition, the technical literature search for the apparatus of group N and the apparatus of group K are not coextensive, e.g., the apparatus of group N may be characterized in the technical literature prior to discovery of group K.

3. Because these inventions are distinct for the reasons given above, and have acquired a separate status in the art as shown by their different classification, the search required for each group is not required for the other groups since each group requires a different non-patent literature search due to each group comprising different method steps, restriction for examination purposes as indicated is proper.

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ja-Na Hines whose telephone number is 571-272-0859. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on 571-272-0864. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ja-Na Hines
May 24, 2005

